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RESEARCH ON PESTICIDE RESIDUES IN 1956
AT THE STATE AGRICULTURAL EXPERIMENT STATIONS

March 1957

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PESTICIDE RESIDUES
in

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Prepared primarily for the use of workers in agricultural
research in the subject matter areas presented.

Data supplied by
State Agricultural Experiment Stations

Compiled in the
State Experiment Stations Division
Agricultural Research Service
United States Department of Agriculture
Washington, D. C.

FOREWORD

The passage of the Pesticide Chemical Residues Amendment (Public Law 518, often called the Miller Amendment) to the Food, Drug and Cosmetic Act focused attention on the need for additional information on pesticide residues. To make the information available on the pesticide residue research in progress at the State Agricultural Experiment Stations, it was suggested that a list be prepared. To facilitate the assembling of this information, the State Experiment Stations Division, Agricultural Research Service, United States Department of Agriculture sent a form to each State agricultural experiment station asking that they list the pesticide residue research that was active at the station in 1956. The following is a compilation of the information received from the State agricultural experiment stations. The Pesticide Chemical Residue Amendment does not deal directly with pesticide residues in soil. However, pesticide residues in soil may be absorbed by the roots and enter into agricultural commodities in this manner. The close relationship between research on pesticide residues in soils and in agricultural commodities appeared to warrant its inclusion in this listing.

It is hoped that this list will facilitate the exchange of information on pesticide residues, methods of determining them and related subjects pertaining to pesticide residues. Any requests for further information should be directed to the station doing the research.

ANIMAL OR ANIMAL PRODUCTS

Toxicant	Entomologist, Plant Pathologist etc.	Analyst	State
<u>ANIMAL OR PRODUCT NOT SPECIFIED</u>			
Chlorinated Hydrocarbons	G.C. Decker	N. Gannon	Illinois
"	D.P. Furman	W.M. Hoskins	Calif.(Riverside)
"	- -	W.H. Orgell	Iowa
DDT	F.S. Barkalow	T.G. Bowery	North Carolina
Dieldrin	"	"	"
Endrin	L.E. Harris	J.C. Street	Utah
Heptachlor	"	"	"
Organic Phosphates	- -	W.H. Orgell	Iowa
Toxaphene	G.H. Blake	- -	Alabama
Toxicant not indicated	H.C. Fink	D.E.H. Frear	Pennsylvania

ANIMAL TISSUESBEEF CATTLE

Endrin	- -	L.C. Terriere	Oregon
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CATTLE

Butadiene Furfural	D.E. Howell	V.G. Heller	Oklahoma
Copolymer			
Malathion	"	"	"

DAIRY CATTLE

Endrin	- -	L.C. Terriere	Oregon
Organic Phosphates	- -	J.E. Casida	Wisconsin

DOGS

Organic Phosphates	- -	J.E. Casida	Wisconsin
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POULTRY

BHC	J.S. Roussel	E.A. Epps	Louisiana
Endrin	- -	L.C. Terriere	Oregon
Malathion	J.M. Grayson	J.F. Eheart	Virginia

RATS

Organic Phosphates	- -	J.E. Casida	Wisconsin
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SWINE

Endrin	- -	L.C. Terriere	Oregon
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EGGS

Endrin	L.E. Harris	J.C. Street	Utah
Heptachlor	"	"	"
Toxicant not indicated	H.C. Fink	D.E.H. Frear	Pennsylvania

MILK

BHC	C.R. Weaver	- -	Ohio
Chlorinated Hydrocarbons	G.C. Decker	John Matteson	Illinois
Endrin	L.E. Harris	J.C. Street	Utah
Heptachlor	"	"	"
Lindane	H.H. Schwardt	D.J. Lisk	N.Y. (Cornell)
Malathion	Ray Hutson	E.J. Benne	Michigan
"	J.M. Grayson	J.F. Eheart	Virginia
Methoxychlor	B.B. Pepper	S.B. Randle	New Jersey
Toxicant not indicated	H.C. Fink	D.E.H. Frear	Pennsylvania

FIBER CROPS

Toxicant	Entomologist, Plant Pathologist etc.	Analyst	State
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COTTON

BHC	J.K. Reed	H.J. Webb	South Carolina
"	N.M. Randolph	R.D. Chisholm, USDA	Texas
Calcium Arsenate	J.S. Roussel	J.W. Torbert	Louisiana
Chlordane	A.D. Telford	J.M. Witt	Arizona
DDT	"	"	"
"	N.M. Randolph	R.D. Chisholm, USDA	Texas
Dieldrin	N.M. Randolph	R.D. Chisholm, USDA	"
Endrin	J.K. Reed	H.J. Webb	South Carolina
Guthion (Cotton seed)	W.D. Wylie	- -	Arkansas
Parathion	N.M. Randolph	R.D. Chisholm, USDA	Texas
Toxaphene	J.K. Reed	H.J. Webb	South Carolina
"	N.M. Randolph	R.D. Chisholm, USDA	Texas
"	A.D. Telford	J.M. Witt	Arizona

FIELD CROPS

Toxicant	Entomologist, Plant Pathologist etc.	Analyst	State
<u>CORN (including sweet corn)</u>			
Aldrin	Stirling Kyd	Shell Chemical Co.	Missouri
"	R.R. Walton	V.G. Heller	Oklahoma
Dalapon	- -	K.P. Buchholtz	Wisconsin
DDT	R.R. Walton	V.G. Heller	Oklahoma
"	J.H. Hawkins	A.S. Getchell	Maine
"	C.H. Brett	T.G. Bowery	North Carolina
"	L.H. Rolston	J.C. Carroll	Ohio
"	M. Semel	D.J. Lisk	New York (Cornell)
"	W.G. Genung	C.H. Van Middeltem	Florida
Diazinon	F.P. Harrison	- -	Maryland
"	P.J. Spangler	Giegy Chemical	Missouri
"	W.R. Enns	"	"
Dieldrin	Stirling Kyd	Shell Chemical Co.	"
"	R.R. Walton	V.G. Heller	Oklahoma
Endrin	Stirling Kyd	Shell Chemical Co.	Missouri
"	R.R. Walton	V.G. Heller	Oklahoma
Parathion	W.G. Genung	C.H. Van Middeltem	Florida
Phosdrin	H.E. Brown	Shell Chemical Co.	Missouri
Thimet	L.P. Ditman	- -	Maryland

PEANUTS

Captan	W.E. Cooper	T.G. Bowery	North Carolina
DDT	G.H. Blake	- -	Alabama
Endrin	J.E. Roberts	R.W. Storherr	Georgia
Lindane	G.H. Blake	- -	Alabama
PCP	W.E. Cooper	T.G. Bowery	North Carolina
Thiram	"	"	"

SORGHUM (Grain)

BHC	N.M. Randolph	R.H. Carter, USDA	Texas
DDT	"	" "	"
"	"	" "	"
Dieldrin	"	" "	"
Malathion	J.E. Roberts	R.W. Storherr	Georgia
Parathion	N.M. Randolph	R.H. Carter, USDA	Texas
Toxaphene	J.E. Roberts	R.W. Storherr	Georgia
"	N.M. Randolph	R.H. Carter	Texas

SOYBEANS

Aldrin	W.E. Burkholder	L.W. Dawsey	Georgia
Calcium Arsenate	J.S. Roussel	J.W. Torbett	Louisiana
Chlordane	W.E. Burkholder	L.W. Dawsey	Georgia -
Heptachlor	"	"	"
Toxaphene	E.W. Beck	"	"

SUGAR CANE

Systox	J.S. Roussel	J.B. McDevitt	Louisiana
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TOBACCO

DDT	W.C. Rhoades	C.H. Van Middlelem	Florida
Endrin	F.E. Guthrie	T.G. Bowery	North Carolina
Parathion	W.C. Rhoades	C.H. Van Middlelem	Florida
Rhothane	F.E. Guthrie	T.G. Bowery	North Carolina
Toxaphene	"	"	"

CROP NOT INDICATED

Chlorinated Hydro- carbon and Organic Phosphates	R.F. Smith O.G. Bacon W.W. Middlekauff	W.M. Hoskins W.R. Erwin R. Miskus	California - (Berkeley)
Toxicant not indicated	H.T. Reynolds R.L. Metcalf	F.A. Gunther T.R. Fukuto	California - (Riverside)

FORAGE

Toxicant	Entomologist, Plant Pathologist etc.	Analyst	State
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ALFALFA

Aldrin	R.J. Quinton	Shell Chemical	Connecticut
"	D.M. Tuttle	J.M. Witt	Arizona
"	Stirling Kyd	Shell Chemical	Missouri
BHC	C.R. Weaver	- -	Ohio
"	H.C. Fink	D.E.H. Frear	Pennsylvania
CIPC (Analytical Methods)	M. Schreiber	D.J. Lisk	N.Y. (Cornell)
Diazinon	L.B. Daniels	- -	Colorado
"	R.J. Quinton	Giegy Chemical	Connecticut

Dieldrin	R.J. Quinton	Shell Chemical	Connecticut
"	Stirling Kyd	"	Missouri
"	B.B. Pepper	S.B. Randle	New Jersey
"	J.R. Dogger	T.G. Bowery	North Carolina
Endrin	R.J. Quinton	Shell Chemical	Connecticut
"	Stirling Kyd	"	Missouri
"	G.A. Bieberdorf	V.G. Heller	Oklahoma
Heptachlor	J.R. Dogger	T.G. Bowery	North Carolina
Malathion	J.E. Roberts	R.W. Storherr	Georgia
"	J.R. Dogger	T.G. Bowery	North Carolina
Methyl Parathion	Stirling Kyd	Monsanto Chemical	Missouri
Parathion	G.A. Bieberdorf	V.G. Heller	Oklahoma
R-1303	R.J. Quinton	Stauffer Chemical	Connecticut
Systox	G.A. Bieberdorf	Chemagro Chemical	Oklahoma
Toxaphene	"	V.G. Heller	"
"	H.C. Fink	D.E.H. Frear	Pennsylvania

CLOVER

Aldrin	G.G. Gyrisco	D.J. Lisk	N.Y. (Cornell)
Diazinon	"	"	"
Dieldrin	"	"	"
Endrin	"	"	"
Heptachlor	H.C. Fink	D.E.H. Frear	Pennsylvania
"	G.G. Gyrisco	D.J. Lisk	N.Y. (Cornell)
Lindane	"	"	"
Strobane	"	"	"
Systox	L.C. Kuitert	C.H. Van Middlelem	Florida

BERMUDA GRASS

Aldrin	E.W. Beck	L.H. Dawsey	Georgia
Chlordane	"	"	"
Heptachlor	"	"	"
Toxaphene	"	"	"

PASTURE GRASS

Calcium Arsenate	J.S. Roussel	J.W. Torbert	Louisiana
Heptachlor	J.R. Dogger	T.G. Bowery	North Carolina
Malathion	W.G. Genung	C.H. Van Middlelem	Florida
Parathion	E.G. Kelsheimer	"	"
"	W.G. Genung	"	"

PEANUT HAY

DDT	W.C. Rhoades	C.H. Van Middeltem	Florida
"	J.R. Dogger	T.G. Bowery	North Carolina
Endrin	"	"	"
Parathion	W.C. Rhoades	C.H. Van Middeltem	Florida
Toxaphene	J.R. Dogger	T.G. Bowery	North Carolina

SOYBEAN FORAGE

Dieldrin	J.R. Dogger	T.G. Bowery	North Carolina
Toxaphene	"	"	"

BIRDSFOOT TREFOIL

Dalapon	M. Schreiber	D.J. Lisk	N.Y.(Cornell)
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MIXED FORAGE

Aldrin	G.G. Gyrisco	D.J. Lisk	N.Y.(Cornell)
DDT	"	"	"
Heptachlor	"	"	"
Malathion	"	"	"
Methoxychlor	"	"	"
Parathion	"	"	"

CROP NOT INDICATED

Dintros (Analytical Methods)	M. Schreiber	D.J. Lisk	N.Y.(Cornell)
DNOSBP	"	"	"
Chlorinated Hydrocarbons	G.C. Decker	N. Gannon	Illinois
Mixtures	T.W. Kerr	C. Olney	Rhode Island
PCNB	D.A. Roberts	D.J. Lisk	N.Y.(Cornell)
Organic Phosphates	- -	C.C. Roan	Kansas
Toxicant not indicated	T.A. Brindley	J.E. Fahey (USDA)	Iowa
"	G.C. Decker	John Matteson	Illinois
"	Norman Gannon	John Herboth	"

GRAINS

Toxicant	Entomologist, Plant Pathologist etc.	Analyst	State
<u>BARLEY</u>			
Toxaphene	P.C. Stone	Hercules Powder Co.	Missouri
<u>OATS</u>			
DDT	N.M. Randolph	R.H. Carter, USDA	Texas
Dieldrin	"	" "	"
Toxaphene	Stirling Kyd	Hercules Powder Co.	Missouri
<u>SMALL GRAINS</u>			
Malathion	D.E. Howell	V.G. Heller	Oklahoma
Parathion	"	"	"
<u>WHEAT</u>			
Endrin	R.E. Pfadt	Shell Chemical Co.	Wyoming
Iso Systox	H.E. Brown	Chemagro Chemical	Missouri
Thimet	"	American Cyanamid	"
Toxaphene	Stirling Kyd	Hercules Powder Co.	"
"	J.A. Callenbach	"	North Dakota
<u>STORED GRAINS</u>			
Chlorinated Hydrocarbons	A.E. Michelbacher	W.M. Hoskins	California (Berkley)
<u>TOXICANTS NOT INDICATED</u>			
	D.L. Lindgren	F.A. Gunther	Calif. (Riverside)
	R.G. Strong	"	"

SMALL FRUIT

Toxicant	Entomologist, Plant Pathologist etc.	Analyst	State
<u>BLACKBERRIES</u>			
Malathion	G.H. Blake	- -	Alabama
Parathion	"	- -	"
<u>BLUEBERRIES</u>			
Dieldrin	B.E. Pepper	S.B. Randle	New Jersey
Malathion	"	"	"
<u>CRANBERRIES</u>			
3 Amino 1,2,4 Triazole	R.J. Aldrich	S.B. Randle	New Jersey
Captan	E.W. Anthon	R.R. Legault	Washington
Perthane	Charles Doughty	"	"
<u>GRAPES</u>			
Captan	J.A. Cox	H.F. Enos	Pennsylvania
Carbamates	"	"	"
DDT	W.R. Enns	E.E. Pickett	Missouri
Diazinon	"	Giegy Chemical	"
Dieldrin	"	Shell Chemical	"
Glyodin	J.A. Cox	H.F. Enos	Pennsylvania
Parathion	W.R. Enns	E.E. Pickett	Missouri
General	E.F. Taschenberg	A.W. Avens	N.Y.(Geneva)
<u>RASPBERRIES</u>			
Fungicides	- -	L.C. Terriere	Oregon
<u>STRAWBERRIES</u>			
Aramite	W.R. Enns	U.S. Rubber Co.	Missouri
Captan	B.J. Davis	S.B. Randle	New Jersey
Carbamates	"	"	"
Chlordane	E.G. Kelsheimer	C.H. Van Middlelem	Florida
Chlorothion	"	"	"
Dipterex	"	"	"
IPC	- -	V.H. Freed	Oregon
Malathion	R.E. Waites	C.H. Van Middlelem	Florida
"	E.G. Kelsheimer	"	"

Parathion	R.E. Waites	C.H. Van Middeltem	Florida
"	E.G. Kelsheimer	"	"
"	W.R. Enns	E.E. Pickett	Missouri
"	- -	L.C. Terriere	Oregon
Systox	R.E. Waites	C.H. Van Middeltem	Florida
Fungicides	- -	L.C. Terriere	Oregon

CROP NOT INDICATED

Aramite	L.M. Smith	W.M. Hoskins	Calif. (Berkeley)
"	W.W. Allen	W.R. Erwin	"
"	"	R. Miskus	"
Chlorinated Hydrocarbons	"	"	"
Chlorinated Sulfates	"	"	"
Cl Sulfonates	"	"	"
Cl Sulfides	"	"	"
Organic Phosphates	"	"	"

TREE FRUITS

Toxicant	Entomologist, Plant Pathologist etc.	Analyst	State
<u>APPLES</u>			
Aramite	- -	L.C. Terriere	Oregon
"	W.J. O'Neill	R.R. Legault	Washington
Captan	Philip Garman	L.G. Kierstead	Connecticut
"	C. F. Smith	T.G. Bowery	North Carolina
"	Dean Asquith	D.E.H. Frear	Pennsylvania
"	A.B. Burrell	D.J. Lisk	N.Y.(Cornell)
"	W.J. O'Neill	R.R. Legault	Washington
"	- -	L.C. Terriere	Oregon
Carbamates	- -	"	"
"	Dean Asquith	D.E.H. Frear	Pennsylvania
"	A.B. Burrell	D.J. Lisk	N.Y.(Cornell)
DDT	G.A. Bieberdorf	V.G. Heller	Oklahoma
"	- -	L.C. Terriere	Oregon
"	- -	D.J. Lisk	N.Y.(Cornell)
"	J.E. Dewey	- -	"
Diazinon	W.R. Enns	Giegy Chemical	Missouri
"	W.J. O'Neill	R.R. Legault	Washington
Dimite	"	"	"
Dipterex	W.R. Enns	Chemagro Chemical	Missouri
"	C.R. Cutright	J.C. Carroll	Ohio
EPN	Philip Garman	L.G. Kierstead	Connecticut
Glyodin	Dean Asquith	D.E.H. Frear	Pennsylvania
"	A.B. Burrell	D.J. Lisk	N.Y.(Cornell)
Heptachlor	W.R. Enns	Velsicol Corp.	Missouri
Karathane	A.B. Burrell	D.J. Lisk	N.Y.(Cornell)
"	W.J. O'Neill	R.R. Legault	Washington
Kelthane	- -	L.C. Terriere	Oregon
"	W.J. O'Neill	R.R. Legault	Washington
Lead Arsenate	Philip Garman	L.G. Kierstead	Connecticut
Malathion	C.F. Smith	T.G. Bowery	North Carolina
"	J.E. Dewey	- -	N.Y.(Cornell)
Maneb	Roderick Sprague	R.R. Legault	Washington
Methoxychlor	Philip Garman	L.G. Kierstead	Connecticut
"	C.F. Smith	T.G. Bowery	North Carolina
"	- -	D.J. Lisk	N.Y.(Cornell)
Ovex	- -	L.C. Terriere	Oregon
"	J.E. Dewey	- -	N.Y.(Cornell)

Parathion	L.B. Daniels	- -	Colorado
"	Philip Garman	L.G. Kierstead	Connecticut
"	C.F. Smith	T.G. Bowery	North Carolina
"	J.E. Dewey	- -	N.Y. (Cornell)
"	G.A. Bieberdorf	V.G. Heller	Oklahoma
Phenyl Mercury			
Acetate	A.B. Burrell	D.J. Lisk	N.Y. (Cornell)
Phenyl Mercury			
Lactate	"	"	"
Quinex	"	"	"
R6199	W.R. Enns	Chipman Chemical	Missouri
Sulfonone	W.J. O'Neill	R.R. Legault	Washington
Sulphur (Mag 70)	A.B. Burrell	D.J. Lisk	N.Y. (Cornell)
Systemic Phosphates	B.B. Pepper	S.B. Randle	New Jersey
Vancide M	A.B. Burrell	D.J. Lisk	N.Y. (Cornell)
Ziram	Roderick Sprague	R.R. Legault	Washington
Miscellaneous	- -	A.W. Avens	N.Y. (Geneva)

AVACADOS

Systox	D.O. Wolfenbarger	C.H. Van Middelam	Florida
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CHERRIES

Aramite	E.W. Anthon	R.R. Legault	Washington
Captan	J.A. Cox	D.E.H. Frear	Pennsylvania
Carbamates	"	"	"
Chlorobenzilate	E.W. Anthon	R.R. Legault	Washington
Diazinon	W.R. Enns	Giegy Chemical	Missouri
Dieldrin	G.A. Bieberdorf	V.G. Heller	Oklahoma
Glyodin	J.A. Cox	D.E.H. Frear	Pennsylvania
Karathane	E.W. Anthon	R.R. Legault	Washington
Kelthane	"	"	"
Parathion	M.E. Perez	J.A. Bonnet	Puerto Rico
Perthane	- -	L.C. Terriere	Oregon
Sulfonone	E.W. Anthon	R.R. Legault	Washington
Fungicide (general)	- -	L.C. Terriere	Oregon
Insecticides	S.E. Lienk	A.W. Avens	N.Y. (Geneva)
(general)			

CITRUS

Dieldrin	D.M. Tuttle	J.M. Witt	Arizona
DNOCHP	R.B. Johnson	J.J. McBride	Florida
Endrin	D.M. Tuttle	J.M. Witt	Arizona
Malathion	W.L. Thompson	J.J. McBride	Florida
Ovex	R.B. Johnson	"	"
Parathion	W.L. Thompson	"	"
"	D.M. Tuttle	J.M. Witt	Arizona
Sulphenone	R.B. Johnson	J.J. McBride	Florida
Sulphur	"	"	"
Systox (Juice)	"	"	"
Miscellaneous	R.L. Metcalf	F.A. Gunther	Calif. (Riverside)
"	G.E. Garman	"	"
"	L.R. Jeppson	"	"
"	W.H. Ewart	"	"

LINES

Systox	D.O. Wolfenbarger	C.H. Van Middeltem	Florida
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PEACHES

Aramite	E.W. Anthon	R.R. Legault	Washington
Captan	Philip Garman	L.G. Kierstead	Connecticut
"	B.J. Davis	S.B. Randle	New Jersey
"	Dean Asquith	D.E.H. Frear	Pennsylvania
"	E.W. Anthon	R.R. Legault	Washington
Carbamates	Philip Garman	L.G. Kierstead	Connecticut
"	B.J. Davis	S.B. Randle	New Jersey
"	Dean Asquith	D.E.H. Frear	Pennsylvania
"	F.B. Struble	E.I. duPont de Nemours Co.	Oklahoma
Chlorobenzilate	E.W. Anthon	R.R. Legault	Washington
Diazinon	W.R. Enns	Giegy Chemical	Missouri
"	E.W. Anthon	R.R. Legault	Washington
Decalone	Philip Garman	L.G. Kierstead	Connecticut
Dieldrin	"	"	"
"	C.F. Smith	T.G. Bowery	North Carolina
"	G.A. Bieberdorf	V.G. Heller	Oklahoma
Dimite	E.W. Anthon	R.R. Legault	Washington
Dipterex	R.W. Rings	J.C. Carroll	Ohio
EPN	Philip Garman	L.G. Kierstead	Connecticut
Fungicides(General)	- -	L.C. Terrière	Oregon
Glyodin	Dean Asquith	D.E.H. Frear	Pennsylvania
Hercules 528	C.F. Smith	T.G. Bowery	North Carolina
Insecticides	S.E. Lienk	A.W. Avens	N.Y. (Geneva)
(General)			

Kelthane	E.W. Anthon	R.R. Legault	Washington
Malathion	W.D. Wylie	- -	Arkansas
"	L.B. Daniels	- -	Colorado
Maneb	Roderick Sprague	R.R. Legault	Washington
Parathion	W.D. Wylie	- -	Arkansas
"	Philip Garman	L.G. Kierstead	Connecticut
"	C.F. Smith	T.G. Bowery	North Carolina
Sulfonone	E.W. Anthon	R.R. Legault	Washington

PEARS

Aramite	- -	L.C. Terriere	Oregon
"	W.J. O'Neill	R.R. Legault	Washington
Chlorobenzilate	"	"	"
DDT	- -	L.C. Terriere	Oregon
Diazinon	W.J. O'Neill	R.R. Legault	Washington
Dimite	"	"	"
Karathane	"	"	"

Kelthane	- -	L.C. Terriere	Oregon
"	W.J. O'Neill	R.R. Legault	Washington
Mitox	"	"	"
Sulfonone	"	"	"
Ziram	- -	L.C. Terriere	Oregon

PECANS

DDT	G.A. Bieberdorf	V.G. Heller	Oklahoma
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PLUMS

Aramite	E.W. Anthon	R.R. Legault	Washington
Chlorobenzilate	"	"	"
Diazinon	W.R. Enns	Giegy Chemical	Missouri
Kelthane	E.W. Anthon	R.R. Legault	Washington
Sulfonone	"	"	"

PRUNES

General	S.E. Lienk	A.W. Avens	N.Y. (Geneva)
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GENERAL

Aramite	E.M. Stafford	W.R. Erwin	Calif. (Berkeley)
Chlorinated	H.F. Madsen	W.M. Hoskins	"
Hydrocarbons			
Chlorinated	F.M. Summers	R. Miskus	Calif. (Davis)
sulfates			
Cl-sulfides	"	"	"
Cl-sulfonate	"	"	"
Organic Phosphates	H.F. Madsen	W.M. Hoskins	Calif. (Berkeley)

Toxicants not indicated	H.M. Barnes	F.A. Gunther	Calif.(Riverside)
"	R.L. Metcalf	T. Fukuto	"
"	J.C. Ortega	- -	"
"	G.C. Decker	John Matteson	Illinois
"	Norman Gannon	John Merboth	"
Miscellaneous	P.A. Dahm	- -	Iowa

VEGETABLES

Toxicant	Entomologist, Plant Pathologist etc.	Analyst	State
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ASPARAGUS

Malathion	L.P. Ditman	- -	Maryland
2-4D	- -	V.H. Freed	Oregon

BEANS

Chlordane	R.E. Waites	C.H. Van Midelem	Florida
Chlorate-borate	R.D. Sweet	D.J. Lisk	N.Y.(Cornell)
DDT	R.E. Waites	C.H. Van Midelem	Florida
"	L.P. Ditman	- -	Maryland
"	C.H. Brett	T.G. Bowery	North Carolina
" (foliage deposit)	J.L. Brann	- -	N.Y.(Cornell)
Diazinon	- -	L.C. Terriere	Oregon
Dieldrin	J.P. Slesman	J.C. Carroll	Ohio
Dilan	C.H. Brett	T.G. Bowery	North Carolina
Dipterex	J.P. Slesman	J.C. Carroll	Ohio
Endrin	C.H. Brett	T.G. Bowery	North Carolina
Malathion	G.H. Blake	- -	Alabama
"	R.E. Waites	C.H. Van Midelem	Florida
"	C. H. Brett	T.G. Bowery	North Carolina
"	R.R. Walton	V.G. Heller	Oklahoma
Methoxychlor	C.H. Brett	T.G. Bowery	North Carolina
Parathion	R.E. Waites	C.H. Van Midelem	Florida
"	R.R. Walton	V.G. Heller	Oklahoma
Systox	R.E. Waites	C.H. Van Midelem	Florida
"	R.R. Walton	V.G. Heller	Oklahoma
Toxaphene	G.H. Blake	- -	Alabama
"	R.E. Waites	C.H. Van Midelem	Florida
"	C.H. Brett	T.G. Bowery	North Carolina
Fungicides	- -	L.C. Terriere	Oregon
Fungicides(general)	J.M. Hamilton	A.W. Avens	N.Y.(Geneva)
Insecticides	- -	"	"
(general)			

BEETS

General	G.E.R. Hervey	A.W. Avens	N.Y. (Geneva)
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BROCCOLI

Chlordane	R.E. Waites	C.H. Van Middeltem	Florida
Chlorothion	E.G. Kelsheimer	"	"
DDT	L.P. Ditman	--	Maryland
Diazinon	"	--	"
Endrin	"	--	"
"	M. Semel	D.J. Lisk	N.Y. (Cornell)
Malathion	L.P. Ditman	--	Maryland
Parathion	M. Semel	D.J. Lisk	N.Y. (Cornell)
"	E.G. Kelsheimer	C.H. Van Middeltem	Florida
Rhothane	Paul Eide	R.R. Legault	Washington
Systox	E.G. Kelsheimer	C.H. Van Middeltem	Florida
Thimet	L.P. Ditman	--	Maryland
Toxaphene	"	--	"

CABBAGE

DDT	J.W. Wilson	C.H. Van Middeltem	Florida
"	E.G. Kelsheimer	"	"
"	W.G. Genung	"	"
"	D.M. Norris	"	"
Diazinon	J.W. Wilson	"	"
"	D.M. Norris	"	"
Endrin	M. Semel	D.J. Lisk	N.Y. (Cornell)
Malathion	J.W. Wilson	C.H. Van Middeltem	Florida
"	D.M. Norris	"	"
"	C.H. Brett	T.G. Bowery	North Carolina
Parathion	J.W. Wilson	C.H. Van Middeltem	Florida
"	W.G. Genung	"	"
"	D.M. Norris	"	"
"	M. Semel	D.J. Lisk	N.Y. (Cornell)
Systox	J.W. Wilson	C.H. Van Middeltem	Florida
"	E.G. Kelsheimer	"	"
Toxaphene	J.W. Wilson	"	"

CARROTS

Aldrin	B.B. Pepper	S.B. Randle	New Jersey
"	Angus Howitt	R.R. Legault	Washington
Chlordane	B.B. Pepper	S.B. Randle	New Jersey
"	Angus Howitt	R.R. Legault	Washington
DDT	B.B. Pepper	S.B. Randle	New Jersey
Diethrin	"	"	"
"	Angus Howitt	R.R. Legault	Washington

Endrin	B.B. Pepper	S.B. Randle	New Jersey
Heptachlor	"	"	"
"	J.E. Dewey	M.H.J. Weiden	N.Y. (Cornell)
"	Angus Howitt	R.R. Legault	Washington
Lindane	B.B. Pepper	S.B. Randle	New Jersey
Nemagon	"	"	"
Rhothane	"	"	"
Toxaphene	"	"	"
Fungicides	- -	L.C. Terriere	Oregon

CAULIFLOWER

Chlorothion	E.G. Kelsheimer	C.H. Van Midelem	Florida
Endrin	M. Semel	D.J. Lisk	N.Y. (Cornell)
Parathion	"	"	"
"	E.G. Kelsheimer	C.H. Van Midelem	Florida
Rhothane	Paul Eide	R.R. Legault	Washington
Systox	E.G. Kelsheimer	C.H. Van Midelem	Florida

CELERY

DDT	J.W. Wilson	C.H. Van Midelem	Florida
Ferbam	J.F. Darby	"	"
Malathion	J.W. Wilson	"	"
Parathion	"	"	"
Systox	"	"	"
Toxaphene	"	"	"
Zineb	J.F. Darby	C.H. Van Midelem	"
Ziram	"	"	"

COLLARDS

DDT	C.H. Brett	T.G. Bowery	North Carolina
Endrin	"	"	"
Lindane	"	"	"
Malathion	"	"	"
Methoxychlor	"	"	"
Toxaphene	"	"	"

CUCUMBERS

Captan	W.E. Cooper	T.G. Bowery	North Carolina
Dipterex	J.P. Slesman	J.C. Carroll	Ohio
Lindane	W.R. Enns	C.H. Gehrke	Missouri

EGG PLANT

Dieldrin	J.P. Slesman	- -	Ohio
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ENDIVE

DDT	E.G. Kelsheimer	C.H. Van Middeltem	Florida
Systox	"	"	"

ESCAROLE

Chlorothion	E.D. Harris	C.H. Van Middeltem	Florida
Parathion	W.G. Genung	"	"
Toxaphene	R.E. Waites	"	"

LETTUCE

AC 528	P.D. Gerhardt	J.M. Witt	Arizona
Chlordane	R.E. Waites	C.H. Van Middeltem	Florida
Chlorothion	E.G. Kelsheimer	"	"
"	E.D. Harris	"	"
CIPC	R.D. Sweet	D.J. Lisk	N.Y. (Cornell)
DDT	R.E. Waites	C.H. Van Middeltem	Florida
"	J.H. Hawkins	A.S. Getchell	Maine
Maneb	R.S. Cox	C.H. Van Middeltem	Florida
Parathion	W.G. Genung	"	"
Systox	R.E. Waites	"	"
"	P.D. Gerhardt	J.M. Witt	Arizona
Thimet	R.E. Waites	C.H. Van Middeltem	Florida
"	P.D. Gerhardt	J.M. Witt	Arizona
Zineb	R.S. Cox	C.H. Van Middeltem	Florida

MELONS

Alanap	R.D. Sweet	D.J. Lisk	N.Y. (Cornell)
Phosdrin	P.D. Gerhardt	J.M. Witt	Arizona

MUSTARD GREENS

Chlorothion	R.E. Waites	C.H. Van Middeltem	Florida
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OKRA

Parathion	R.E. Waites	C.H. Van Middeltem	Florida
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ONIONS

Endrin	Angus Howitt	R.R. Legault	Washington
Fungicides	- -	L.C. Terriere	Oregon
Penta "10"	R.D. Sweet	D.J. Lisk	N.Y. (Cornell)

PEAS

Toxaphene	R.E. Waites	C.H. Van Middeltem	Florida
General	G.E.R. Hervey	A. A. Avens	N.Y. (Cornell)

PIMIENTOS

Malathion	J.E. Roberts	R.W. Storherr	Georgia
Toxaphene	"	"	"

POTATOES

Arsenite	R.D. Sweet	D.J. Lisk	N.Y. (Cornell)
Chlordane	D.M. Norris	C.H. Van Middeltem	Florida
DCB-60	F.B. Struble	- -	Oklahoma
DDT	J.S. Roussel	H.C. Austin	Louisiana
"	G.W. Simpson	A.S. Getchell	Maine
Methoxychlor	J.S. Roussel	F.L. Bonner	Louisiana
Mylone	F.B. Struble	Carbon & Carbide Chemical	Oklahoma
Systox	D.M. Norris	C.H. Van Middeltem	Florida
"	J.S. Roussel	J.B. McDevitt	Louisiana
Toxaphene	G.W. Simpson	A.S. Getchell	Maine
VC13	F.B. Struble	Virginia-Carolina Chemical	Oklahoma
Fungicides	- -	L.C. Terriere	Oregon

RADISHES

Parathion	E.G. Kelsheimer	C.H. Van Middeltem	Florida
Systox	"	"	"

SPINACH AND BEET TOPS

Aldrin	L.P. Ditman	- -	Maryland
Captan	F.B. Struble	Cal. Spray and Chemical	Oklahoma
CIPC	R.D. Sweet	D.J. Lisk	N.Y. (Cornell)
Diazinon	R.J. Quinton	Giegy Chemical	Connecticut
Diethrin	L.P. Ditman	- -	Maryland
Dipterex	R.J. Quinton	Chemagro Chemical	Connecticut
Endrin	B.B. Pepper	S.B. Randle	New Jersey
Guthion	R.J. Quinton	Chemagro Chemical	Connecticut
Heptachlor	"	L.G. Kierstead	"
"	L.P. Ditman	- -	Maryland
Malathion	G.A. Bieberdorf	V.G. Heller	Oklahoma
Parathion	B.B. Pepper	S.B. Randle	New Jersey
"	G.A. Bierberdorf	V.G. Heller	Oklahoma
R-1303	R.J. Quinton	Stauffer Chemical	Connecticut
Systox	G.A. Bieberdorf	V.G. Heller	Oklahoma
Toxaphene	L.P. Ditman	- -	Maryland
Zineb	F.B. Struble	Rohn & Haas	Oklahoma
General	- -	A.W. Avens	N.Y. (Geneva)

SQUASH

Aldrin	- -	L.C. Terriere	Oregon
DCB-60	F.B. Struble	- -	Oklahoma
Myllone	"	Carbide & Carbon Chemical	"
Systox	R.E. Waites	C.H. Van Middlelem	Florida
VC-13	F.B. Struble	Virginia-Carolina Chemical	Oklahoma

TOMATOES

AC528	P.D. Gerhardt	J.M. Witt	Arizona
DDT	L.B. Daniels	- -	Colorado
"	C.H. Brett	T.G. Bowery	North Carolina
"	D.O. Wolfenbarger	C.H. Van Middlelem	Florida
Diazinon	W.E. Bickley	- -	Maryland
"	B.B. Pepper	S.B. Randle	New Jersey
Dilan	D.O. Wolfenbarger	C.H. Van Middlelem	Florida
Dipterex	J.P. Sleesman	J.C. Carroll	Ohio
Endrin	C.H. Brett	T.G. Bowery	North Carolina
EPN	D.O. Wolfenbarger	C.H. Van Middlelem	Florida
Lindane	C.H. Brett	T.G. Bowery	North Carolina
Malathion	D.O. Wolfenbarger	C.H. Van Middlelem	Florida
"	L.P. Ditman	- -	Maryland
"	B.B. Pepper	S.B. Randle	New Jersey
"	C.H. Brett	T.G. Bowery	North Carolina
Methoxychlor	"	"	"
Parathion	R.E. Waites	C.H. Van Middlelem	Florida
"	D.O. Wolfenbarger	"	"
Systox	P.D. Gerhardt	J.M. Witt	Arizona
"	R.E. Waites	C.H. Van Middlelem	Florida
Thimet	P.D. Gerhardt	J.M. Witt	Arizona
Toxaphene	R.E. Waites	C.H. Van Middlelem	Florida
"	C.H. Brett	T.G. Bowery	North Carolina
General	- -	A.W. Avens	N.Y. (Geneva)

TURNIP GREENS

Isolan	R.E. Waites	C.H. Van Middlelem	Florida
Parathion	"	"	"
Pyrazoxon	"	"	"
Malathion	"	"	"
Systox	"	"	"

CROP NOT INDICATED

Chlorinated

Hydrocarbons and
Organic Phosphates

- -

W.H. Orgell

Iowa

"

W.H. Lange

W.M. Hoskins

Calif. (Berkeley)

"

E.C. Carlson

W.R. Erwin

"

"

R.H. Sciaroni

R. Miskus

"

"

N.F. McCalley

- -

"

Toxicant not
indicated

L.D. Anderson

F.A. Gunther

Calif. (Riverside)

"

R.L. Metcalf

T.R. Fukuto

"

"

G.C. Decker

John Matteson

Illinois

"

Norman Gannon

John Merboth

"

MISCELLANEOUS CROPS OR PRODUCTS

Toxicant	Entomologist, Plant Pathologist etc.	Analyst	State
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HOPS

Fungicides

- -

L.C. Terriere

Oregon

MUSHROOMS

Fungicides

H.C. Fink

D.E.H. Frear

Pennsylvania

PEPPERMINT

Fungicides

- -

L.C. Terriere

Oregon

PINEAPPLES

Endrin

M.E. Perez

J.A. Bonnet

Puerto Rico

SOIL PESTICIDES

Toxicant	Entomologist, Plant Pathologist etc.	Analyst	State
Aldrin	G.C. Decker	N. Gannon	Illinois
"	W.M. Kulash	T.G. Bowery	North Carolina
"	- -	E.P. Lichtenstein	Wisconsin
"	J.E. Dewey	M.H.J. Weiden	N.Y. (Cornell)
"	- -	A.W. Avens	N.Y. (Geneva)
Amino Triazole	M. Schrieber	D.J. Lisk	N.Y. (Cornell)
BHC (Peaches)	W.D. Wylie	- -	Arkansas
" (Alfalfa)	C.R. Weaver	- -	Ohio
Chlordane (Peaches)	W.D. Wylie	- -	Arkansas
C.M.U. (Asparagus)	E.M. Rahn	C.W. Woodmansee	Delaware
DDT	G.C. Decker	N. Gannon	Illinois
DDT (Cotton)	C.H. Thomas	H.J. Webb	South Carolina
Dieldrin (Peaches)	W.D. Wylie	- -	Arkansas
"	G.C. Decker	N. Gannon	Illinois
"	C.W. Wingo	- -	Missouri
"	- -	A.W. Avens	N.Y. (Geneva)
"	- -	E.P. Lichtenstein	Wisconsin
"	J.E. Dewey	M.H.J. Weiden	N.Y. (Cornell)
Heptachlor	G.C. Decker	N. Gannon	Illinois
"	C.W. Wingo	- -	Missouri
"	- -	A.W. Avens	N.Y. (Geneva)
"	W.M. Kulash	T.G. Bowery	North Carolina
"	J.E. Dewey	M.H.J. Weiden	N.Y. (Cornell)
Lindane	- -	E.P. Lichtenstein	Wisconsin
Methoxychlor (Peaches)	W.D. Wylie	- -	Arkansas
Parathion (Peaches)	"	- -	"
Toxaphene	G.C. Decker	N. Gannon	Illinois
General	J.H. Lilly	J.E. Fahey (USDA)	Iowa
Toxicant not indicated	G.C. Decker	John Matteson	Illinois
	Norman Gannon	John Merboth	"



